Appendix B

DEFINITIONS AND EXPLANATIONS

Population coverage. This report includes the civilian noninstitutional population of the United States and approximately 1,031,000 members of the Armed Forces in the United States living off post or with their families on post, but excludes all other members of the Armed Forces.

Symbols. A dash (·) represents zero or rounds to zero, and the symbol "B" means that the base for the derived figure is less than 75,000. Three dots (. . .) means not applicable, and "NA" means not available.

Metropolitan-nonmetropolitan residence. The population residing in standard metropolitan statistical areas (SMSA's) constitutes the metropolitan population. Except in New England, an SMSA is a county or group of contiguous counties which contain at least one city of 50,000 inhabitants or more, or "twin cities" with a combined population of at least 50,000. In addition to the county or counties containing such a city or cities, contiguous counties are included in an SMSA if, according to certain criteria, they are essentially metropolitan in character and are socially and economically integrated with the central county. In New England, SMSA's consist of towns and cities, rather than counties.

Central cities. Each SMSA must include at least one central city, and the complete title of an SMSA identified the central city or cities. If only one central city is designated, it must have 50,000 inhabitants or more. The area title may include, in addition to the largest city, up to two city names on the basis and in the order of the following criteria: (1) the additional city has at least 250,000 inhabitants or (2) the additional city has a population of one-third or more of that of the largest city and a minimum population of 25,000. An exception occurs where two cities have contiguous boundaries and constitute, for economic and social purposes, a single community of at least 50,000, the smaller of which must have a population of at least 15,000.

Geographic regions. The four major regions of the United States for which data are presented in this report represent groups of States, as follows:

Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont.

North Central: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin.

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia.

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming.

Age. The age classification is based on the age of the person at last birthday (understood for all characteristics except income which is previous year).

Family. The term "family," as used in this report, refers to a group of two or more persons related by blood, marriage, or adoption and residing together; all such persons are considered members of the same family.

Head of family. In the field operation for the SIE, one person in each family was designated as the "head." This person is usually the person so regarded by members of that family. Women are not so classified if their husbands are resident members of the family at the time of the survey. The term "head" is used in the detailed tables but is not used in the text of this report. In the 1980 census, the Bureau of the Census plans to discontinue the use of the term "head of family." Instead, the term "family householder" is likely to be used. Recent social changes have resulted in greater sharing of household responsibilities among the adult members and, therefore, have made the term "head" increasingly inappropriate in the analysis of household and family data. Specifically, the Bureau is reconsidering its longtime practice of always classifying the husband as the head when he and his wife are living together. The householder is to be the first adult household member listed on the census questionnaire in whose name the home is owned or rented.

Related children. All persons in this report whose enrollment was studied were in a household where they were either sons and daughters, including stepchildren and adopted children, of the family head or otherwise related to the family head by blood, marriage, or adoption.

Race. The population is divided into three groups on the basis of race: White, Black, and "other races." The last category includes Indians, Japanese, Chinese, and any other race except White and Black.

Persons of Spanish origin. Persons of Spanish origin in this report were determined on the basis of a question that asked for self-identification of the person's origin or descent. Persons of Spanish origin were those who indicated that their origin was Mexican, Puerto Rican, Cuban, Central or South American, or some other Spanish origin. It should be noted that persons of Spanish origin may be of any race.

B-1. Age Ranges for Compulsory School Attendance, by State: 1977

State	Compulsory attendance age range[1]	State	Compulsory attendance age range[1]
1	2	1	2
Alabama.....................	between 7 and 16	New Jersey................	between 6 and 16
Alaska.....................	between 7 and 16	New Mexico................	attained 6 and until attaining 17
Arizona....................	between 8 and 16	New York..................	from 6 to 16
Arkansas...................	between 7 and 15 (both inclusive)	North Carolina...........	between 7 and 16
California.................	between 6 and 16	North Dakota..............	of 7 to 16
Colorado...................	of 7 and under 16	Ohio.....................	between 6 and 18
Connecticut................	over 7 and under 16	Oklahoma..................	between 8 and 16
Delaware...................	between 6 and 16	Oregon....................	between 7 and 18
District of Columbia.......	between 7 and 16	Pennsylvania..............	not later than 8, until 17
Florida....................	attained 7 but not 16	Rhode Island..............	completed 7 years of life, not completed 16 years of life
Georgia....................	between 7th and 16th birthdays	South Carolina...........	of 7 to 16
Hawaii.....................	at least 6 and not 18	South Dakota..............	of 7 and not exceeding 16
Idaho......................	of 7 but not 16	Tennessee.................	between 7 and 16
Illinois...................	between 7 and 16	Texas.....................	as much as 7, not more than 17
Indiana....................	not less than 7, not more than 16	Utah......................	between 6 and 18
Iowa.......................	over 7 and under 16	Vermont...................	between 7 and 16
Kansas.....................	of 7 and under 16	Virginia..................	reached 6th birthday, not passed the 17th birthday
Kentucky...................	of 7 and under 16		
Louisiana..................	between 7 and 15	Washington................	child 8 and under 15
Maine......................	between 7th and 15th anniversaries	West Virginia.............	begin with the 7th birthday, continue to the 16th birthday
Maryland...................	between 6 and 16	Wisconsin.................	between 6 and 16
Massachusetts[2]...........	between 6 and 16	Wyoming...................	between 7 and 16 inclusive
Michigan...................	between 6 and 16		
Minnesota..................	between 7 and 16		
Mississippi................	from 7 to 13	Outlying areas:	
Missouri...................	between 7 and 16		
Montana....................	is 7, not yet reached 16th birthday	Puerto Rico...............	between 8 and 14
Nebraska...................	not less than 7 nor more than 16	Virgin Islands............	school year nearest 5th birthday until expiration of the school year nearest 16th birthday
Nevada.....................	between 7 and 17		
New Hampshire..............	between 6 and 16		

[1]Many States have special provisions for children who have completed a certain level of education (usually 8th grade or higher) and who are employed.
[2]Lower and upper levels established by the State Board of Education.

Source: U.S. Department of Health, Education and Welfare. National Center for Education Statistics. _Digest of Education Statistics 1977-78._
Table 34. Identified by the National Center for Education Statistics from State laws.

School enrollment. The school enrollment statistics in this survey are based on replies to the enumerator's inquiry as to whether the person was enrolled in school. Enumerators were instructed to count as enrolled anyone who had been enrolled or had attended school since February 1, 1976 in any type of graded public, parochial or other private school in the regular school system unless the person had left school for the remainder of the current school term. The data included in this report apply only to enrollment in regular schools which advance a person toward an elementary school certificate, or a high school diploma. Special schools which include trade, or vocational schools as well as schools for the mentally retarded which do not advance a person to a certificate or degree within the regular school system were not included in the enrollment figures.

Modal grade. Enrolled persons are classified according to their relative progress in school, that is, according to whether the grade or year in which they were enrolled was below, at, or above the modal (typical) grades for persons of their age at the time of the survey. The modal grades were determined statistically by choosing the years of school in which the largest proportion of students of a given age are enrolled.

At the beginning of the school year, each year of age between 8 and 17 corresponds to a single modal grade. This strong modal tendency is found in the annual October Cur-

rent Population Survey, for example. However, in the spring, when the SIE and the decennial Census of Population are conducted, children have aged about 6 months; two grades (table B-2) are common for each single year of age. In the October CPS, the modal grade used for each single year of age is the higher of the two grades shown in table B-2; that

B-2. Modal Grade of Enrollment by Single Years of Age

Age at time of survey or census	Modal grades	Grades below the mode
8 years........	E2 and E3	K and E1
9 years........	E3 and E4	E2 and below
10 years......	E4 and E5	E3 and below
11 years......	E5 and E6	E4 and below
12 years......	E6 and E7	E5 and below
13 years......	E7 and E8	E6 and below
14 years......	E8 and HS1	E7 and below
15 years......	HS1 and HS2	E8 and below
16 years......	HS2 and HS3	HS1 and below
17 years......	HS3 and HS4	HS2 and below

B-3. Enrollment in School and Below Modal Grade in the October 1975 Current Population Survey (CPS) and Spring 1976 Survey of Income and Education (SIE)

(Numbers in thousands. Civilian noninstitutional population. For meaning of symbols, see text)

Age	October 1975 CPS			Spring 1976 SIE		
	Number	Percent enrolled	Percent of enrolled below mode	Number	Percent enrolled	Percent of enrolled below mode
5 years.....................	3,509	90.5	...	3,540	64.9	...
6 years.....................	3,446	99.1	...	3,478	96.2	...
7 years.....................	3,402	99.5	12.6	3,412	99.2	...
8 years.....................	3,408	99.2	15.3	3,347	99.8	3.8
9 years.....................	3,544	99.3	16.4	3,463	99.6	4.9
10 years.....................	3,885	99.2	16.6	3,670	99.8	5.7
11 years.....................	3,914	99.4	19.1	3,865	99.7	6.7
12 years.....................	4,087	99.4	20.7	3,953	99.5	7.6
13 years.....................	4,050	99.1	21.2	4,070	99.5	8.0
14 years.....................	4,235	98.7	22.1	4,168	98.6	8.5
15 years.....................	4,218	97.7	24.1	4,202	98.0	9.6
16 years.....................	4,280	94.0	23.4	4,131	95.9	11.0
17 years.....................	4,033	83.6	19.9	3,910	90.9	11.2

is, for 8-year-olds the modal grade is the third year of elementary school in October, but in the spring, the second and the third year of elementary school are typical for 8-year-olds. This procedure may classify some students who were held behind in school as still within the normal progression through school. Comparison of the October 1975 CPS data on enrollment by grade with the spring 1976 SIE data reveals significant differences between rates of enrollment below the mode depending on whether the mode is defined as 1 year in the autumn or as 2 years in the spring, 6 months later (table B-3). The relative differences between population groups should not be affected however.

Educational attainment. Information on educational attainment was derived from the combination of answers to questions concerning the highest grade of school attended by the person and whether or not that grade was finished. The questions on educational attainment apply only to progress in "regular" schools (described under school enrollment).

Language usage. The household respondent was asked, "What language do the people in this household usually speak here at home?" Responses to this item were used as a measure of household language environment of children in this report. Each household member 4 years old and over in households where a non-English language was reported to be the usual language was asked to estimate their ability to speak and understand English. They were asked, "How well does this person understand spoken English?" and "How well does this person speak English?" All persons who reported "Not well" and "Not at all" were defined as having difficulty with English.

Poverty classification. Families and unrelated individuals are classified as above or below the low income level using the

poverty index adopted by a Federal Interagency Committee in 1969. This index is based on the Department of Agriculture's 1961 Economy Food Plan and reflects the different consumption requirements of families based on their size and composition, sex and age of the family head, and farm or nonfarm residence. It was determined from the Department of Agriculture's 1955 survey of food consumption that families of three or more persons spend approximately one-third of their income on food; the poverty level for these families was, therefore, set at three times the cost of the economy food plan. For smaller families and persons living alone, the cost of the economy food plan was multiplied by factors that were slightly higher in order to compensate for the relatively larger fixed expenses of these smaller households.

The poverty thresholds are updated every year to reflect changes in the Consumer Price Index (CPI). Thus, the poverty threshold for a nonfarm family of four was $5,500 in 1975 (the year for which income was reported in the 1976 SIE); this amount was about 9 percent higher than the comparable 1974 cutoff of $5,038.

SOURCE AND RELIABILITY OF THE ESTIMATES

Source of the Data

The estimates for school enrollment from the Survey of Income and Education (SIE) are based on data collected during the spring months of 1976. This survey was conducted by the Bureau of the Census acting as collection agent for the Department of Health, Education, and Welfare.

Approximately 158,500 households, selected independently in the 50 States and the District of Columbia, were eligible for interview in SIE. Of this number, 7,300

interviews were not obtained because the occupants were temporarily absent, refused to be interviewed, or, after repeated callbacks, could not be found at home. In addition to the 158,500 households, there were about 33,000 sample units which were visited and found to be vacant, condemned, unfit, demolished, etc., and therefore were ineligible for interview. The distribution of the occupied households, noninterviews, and households ineligible for interview by State is shown in table B-4.

The sample design for the SIE sample was a stratified multi-stage cluster design. Each State was divided into areas made up of counties and independent cities referred to as primary sampling units (PSU's). These PSU's were then grouped to form strata within each State according to the proportion of persons who were children 5 through 17 years old living in poverty families at the time of the 1970 census. Some strata consisted of only one PSU (generally the larger metropolitan areas and some larger nonmetropolitan PSU's) which came into sample with certainty and which were called self-representing. In nine States (Connecticut, Delaware, District of Columbia, Hawaii, Maryland, Massachusetts, New Hampshire, Rhode Island, and Vermont) every PSU was made self-representing. In the remaining States, two PSU's were selected without replacement from each of the strata which were not self-representing. These sample PSU's are called non-self-representing PSU's.

Within selected PSU's, a sample of housing units enumerated in the 1970 Census of Population and Housing was selected. In addition, a sample of new construction building permits was also selected to represent the units constructed in areas under the jurisdictions of building permit offices (permit-issuing areas) since the 1970 census. Further, a sample of units constructed since the 1970 census in areas not under the jurisdiction of building permit offices (nonpermit-issuing areas) and units from mobile home parks established since the 1970 census was selected.

Estimation procedure for SIE. The first step in the estimation procedure involved the inflation of the sample data by the reciprocal of the probability of its selection. Next, adjustments were made to account for occupied households in which interviews were not obtained because the occupants were temporarily absent, refused to be interviewed, or, after repeated callbacks, could not be found at home. This adjustment was made separately to households in different race of head-residence-1970 census poverty level categories. Table B-4 shows the overall noninterview rates for the United States, Divisions, and States.

In order to obtain more reliable estimates, various stages of ratio estimation were employed which made extensive use of available auxiliary data on characteristics of the survey population. The source of most of this auxiliary data was geographic information about the sample units, 1970 census data and current independent population counts.

The first stage of ratio estimation was employed for sample households from non-self-representing (NSR) PSU's only. This procedure adjusted for the differences that existed at the time of the 1970 census in the distribution of persons by race and residence as estimated from the sample NSR PSU's and from the NSR population in each State. This ratio estimation was designed to reduce the variance attributable to the sampling of PSU's.

Additional stages of ratio estimation were employed to adjust for coverage problems and to bring the distribution of the sample population into agreement with the distribution of the population from which the sample was selected. The second stage of ratio estimation was only employed for new construction sample units (i.e., sample units built April 1, 1970 or later) in permit-issuing areas. The sample estimate of new construction in these areas was ratio-adjusted to agree with an independently derived estimate from the Survey of Construction (SOC), a survey of building permits conducted monthly by the Bureau of the Census.

In the third stage the national sample estimates of civilian persons were controlled to independently derived national estimates for various age, race, and sex categories. To these totals were added the population estimates of those in the armed forces living off post or with their families on post. The fourth stage adjustment was made so that the husband and wife of a family received the same weight. Finally, the last stage adjusted the State sample estimates of civilian persons to agree with independently derived estimates of State population for three age categories in each State.

The last three stages in the estimation procedure were iterated in order to bring the SIE estimates into close agreement with both the national and State independent estimates. The effect of these final stages of ratio estimation, as well as the overall estimation procedure, was to reduce the error for most statistics below what would have been obtained by simply weighting the results of the SIE sample by the inverse of the probability of selection.

1950, 1960 and 1970 Censuses of Population and Housing. The estimates pertaining to the 1970 population (i.e., the population that existed at the time of the 1970 census) are based on either the 20-percent, 15-percent, or 5-percent sample data collected in April 1970 for the Decennial Census of Population and Housing. A detailed description of the sample design and estimation procedure can be obtained in the 1970 census reports PC(1), Detailed Characteristics. The estimates pertaining to the 1960 population are based on the 25-percent sample data collected in April 1960 for the Decennial Census of Population and Housing. The estimates pertaining to the 1950 population are based on the 20-percent sample data collected in April 1950 for the Decennial Census of Population and Housing. Detailed descriptions of the sample designs and estimation procedures can be found in the appropriate reports.

Reliability of the Estimates

There are two types of possible errors associated with Estimates based on data from sample surveys, sampling and nonsampling errors. The following is a description of the sampling and nonsampling errors associated with the SIE sample. A description of the sampling errors and nonsampling errors associated with the sample estimates from the 1970 census appears in the 1970 census reports, PC(1), Detailed Characteristics. The sampling errors for 1970 census

Table B-4. SIE Households and Noninterview Rates

States	Total house- holds	Eligible households		Noninterviewed		Ineligible households	
		Number	Inter- viewed	Number	Rate (4 ÷ 2)	Number	Rate (6 ÷ 1)
	(1)	(2)	(3)	(4)	(5)	(6)	
United States.....................	191,459'	158,475	151,170	7,305	4.6	32,984	17.2
New England.......................	26,970	21,604	20,754	850	3.9	5,366	19.9
Maine............................	3,123	2,240	2,189	51	2.3	883	28.3
New Hampshire....................	5,834	4,434	4,261	173	3.9	1,450	24.6
Vermont..........................	3,752	2,796	2,723	73	2.6	956	25.5
Massachusetts....................	4,614	3,879	3,664	215	5.5	735	15.9
Rhode Island.....................	4,193	3,509	3,386	123	3.5	684	16.3
Connecticut......................	5,404	4,746	4,531	215	4.5	658	12.2
Middle Atlantic...................	16,506	14,323	13,459	864	6.0	2,183	13.2
New York.........................	5,276	4,521	4,211	310	6.9	755	14.3
New Jersey.......................	5,684	5,007	4,694	313	6.3	677	11.9
Pennsylvania.....................	5,546	4,795	4,554	241	5.0	751	13.5
East North Central...............	25,797	21,905	20,933	972	4.4	3,892	15.1
Ohio.............................	5,508	4,766	4,501	265	5.6	742	13.5
Indiana..........................	4,820	4,083	3,965	118	2.9	737	15.3
Illinois.........................	5,480	4,776	4,499	277	5.8	704	12.8
Michigan.........................	5,744	4,669	4,450	219	4.7	1,075	18.6
Wisconsin........................	4,245	3,611	3,518	93	2.6	634	14.9
West North Central...............	25,592	21,230	20,448	782	3.7	4,362	17.0
Minnesota........................	4,238	3,579	3,485	94	2.6	659	15.5
Iowa.............................	4,694	4,000	3,879	121	3.0	694	14.8
Missouri.........................	3,088	2,463	2,343	120	4.9	625	20.2
North Dakota.....................	3,644	3,007	2,922	85	2.8	637	17.5
South Dakota.....................	2,365	1,846	1,765	81	4.4	519	21.9
Nebraska.........................	3,624	3,075	2,932	143	4.7	549	15.1
Kansas...........................	3,939	3,260	3,122	138	4.2	679	17.2
South Atlantic...................	22,052	18,031	17,098	933	5.2	4,021	18.2
Delaware.........................	3,001	2,455	2,310	145	5.9	546	18.2
Maryland.........................	3,262	2,869	2,714	155	5.4	393	12.0
District of Columbia.............	2,172	1,824	1,578	246	13.5	348	16.0
Virginia.........................	2,478	2,122	2,036	86	4.1	356	14.4
West Virginia....................	2,073	1,709	1,671	38	2.2	364	17.6
North Carolina...................	1,997	1,613	1,555	58	3.6	384	19.2
South Carolina...................	1,895	1,441	1,380	61	4.2	454	24.0
Georgia..........................	1,937	1,582	1,534	48	3.0	355	18.3
Florida..........................	3,237	2,416	2,320	96	4.0	821	25.4)
East South Central...............	8,057	6,552	6,361	191	2.9	1,505	18.7ᶜ
Kentucky.........................	1,970	1,587	1,517	70	4.4	383	19.4
Tennessee........................	2,185	1,791	1,736	55	3.1	394	13.0
Alabama..........................	2,055	1,686	1,653	33	2.0	369	18.0ˉ
Mississippi......................	1,847	1,488	1,455	33	2.2	359	19.4
West South Central...............	11,531	9,511	9,158	353	3.7	2,020	17.5
Arkansas.........................	1,925	1,531	1,505	26	1.7	394	20.5
Louisiana........................	2,065	1,735	1,659	76	4.4	330	16.0
Oklahoma.........................	2,429	1,989	1,896	93	4.7	440	18.1
Texas............................	5,112	4,256	4,098	158	3.7	856	16.7
Mountain..........................	33,755	27,773	26,383	1,390	5.0	5,982	17.7
Montana..........................	3,963	3,190	3,034	156	4.9	773	19.5
Idaho............................	5,879	4,773	4,568	205	4.3	1,106	18.8
Wyoming..........................	4,536	3,741	3,569	172	4.6	795	17.5
Colorado.........................	3,782	3,174	3,014	160	5.0	608	16.1
New Mexico.......................	2,589	2,164	2,077	87	4.0	425	16.4
Arizona..........................	2,705	2,160	2,042	118	5.5	545	20.1
Utah.............................	5,110	4,309	4,136	173	4.0	801	15.7
Nevada...........................	5,191	4,262	3,943	319	7.5	929	17.9
Pacific...........................	21,199	17,546	16,576	970	5.5	3,653	17.2
Washington.......................	4,406	3,743	3,567	176	4.7	663	15.0
Oregon...........................	4,841	4,141	3,944	197	4.8	700	14.5
California.......................	5,067	4,432	4,202	230	5.2	635	12.5
Alaska...........................	3,677	2,568	2,360	208	8.1	1,109	30.2
Hawaii...........................	3,208	2,662	2,503	159	6.0	546	17.0

data are much smaller than those for SIE data and therefore, when making comparisons between the two data sources, it can be safely assumed that the census data are subject to negligible sampling errors. Similarly the 1960, or 1950 census data, are subject to negligible sampling errors.

Nonsampling variability. In general, nonsampling errors can be attributed to many sources: inability to obtain information about all cases, definitional difficulties, differences in the interpretation of questions, inability or unwillingness to provide correct information on the part of respondents, mistakes in recording or coding the data, and other errors of collection, response, processing, coverage, and estimation for missing data. As can be seen from the above list, nonsampling errors are not unique to sample surveys since they can, and do, occur in complete censuses as well.

It should be pointed out that steps used in the estimation procedure to reduce errors due to nonresponse and coverage deficiencies introduce nonsampling errors of their own. However, the errors introduced are believed to be smaller than the errors due to nonresponse and coverage deficiencies.

Coverage errors. It was mentioned previously that the SIE sample was selected from four frames: (1) the 1970 census, (2) new construction in permit-issuing areas, (3) new construction from non-permit-issuing areas, and (4) mobile home parks established since the 1970 census. These four frames do not completely cover the total housing unit inventory, and hence there are some coverage deficiencies in the SIE sample.

It has been estimated that the 1970 census missed about 2½ percent (i.e., about 1.7 million units) of the total 1970 housing inventory. These units have also been missed by SIE.

During the sampling of building permits, only those permits issued between January 1, 1970 and November 1975 inclusive, were eligible to be sampled to represent new construction in permit-issuing areas. It had been assumed that units with permits issued prior to 1970 would have been completed by the time of the 1970 census (i.e., April 1970) and, therefore, would have been represented in the sample selected from the 1970 census units. Due to time constraints, it was not possible for units whose permits were issued after November 1975 to be selected in time to be interviewed during the SIE interview period. It has been estimated that the new construction misses were about 8 percent (i.e., about 900,000 units) of all new construction units.

In addition to the above missed units, mobile homes that were not in parks and that were either placed in their current site after the 1970 census or were vacant at the time of the census, housing units that were converted from non-residential to residential use since the census, and housing units that have been moved since the census had no chance of being selected for the SIE sample. No estimate currently exists of the total number of missed units in these categories.

The ratio estimation procedure discussed above has partially corrected the survey data for these coverage eficiencies. That is, the ratio estimation has tended to bring the survey estimates to the appropriate level though there still may remain small errors in the di ution.

Evaluation studies. Although it would be exceptionally difficult to asses fully each source of error, an attempt was made to measure the possible effects of some of these sources as they might affect estimates from the Survey of Income and Education. Acting to comply with the congressional legislation, particular effort was concentrated in evaluating the accuracy of the measurement of poverty according to the present definition. A principal component of this evaluation was a return visit, by different interviewers, to approximately 5 percent of the households in the SIE sample. For these selected households, which were concentrated in low to moderate income households, an independent interview was conducted, referring only to necessary identifying information from the first interview. The small size of the sample, approximately 9,000 designated households, permitted inclusion of features intended to produce a more accurate measurement. For example, persons age 16 and over were asked to respond for themselves, wherever possible, even when repeated callbacks to the households were required. A new questionnaire was designed to ask each respondent first about the sources of income the respondent had during 1975 and then to obtain the amount for each of these sources by detailed questions. A comparison of these reinterviews with the original interviews measured the potential biases that the choice of survey procedures may have had on the estimates of poverty.

At the national level, the reinterview results on the number of children age 5 to 17 in poverty families were within sampling error of the SIE result. However, the reinterview changed the poverty classification of a substantial number of families. The principal reason for reclassification for the majority of cases was a change in reported earnings income, and for this group there was a slight tendency (although not statistically significant) for the reinterview to increase the count of poverty. On the smaller number of cases reclassified because of changes in reported transfer payments, there was weak statistical evidence that the effect of reinterview was to move families out of poverty. In addition, the reinterview provided no firm statistical evidence that any particular region of the country was inequitably treated relative to the others by systematic error. The comparison has been carried down to the level of the nine census divisions, the lowest level at which the reinterview results can be reliably interpreted. The results of the evaluation have been recorded in the census report, "Assessment of the Accuracy of the Survey of Income and Education: A Report to Congress as Mandated by the Educational Amendments of 1974."

The second component was an evaluation of the coverage of the SIE sample frame. From 2,632 SIE sample units in primarily rural areas, four neighboring units were identified and interviews were conducted at those neighboring units which had no chance of being included in the SIE sample (i.e., missed units). In addition, approximately 6,800 structures in both rural and nonrural areas that contained a unit from the SIE sample were matched to the 1970 census and interviews were conducted at missed households (households that had no chance of selection). The objective of this study was the measurement of coverage biases due to missed units in primarily rural areas and to missed households within

structures. The results of this evaluation study were not available at the time of this report. A report of the evaluation study will be made subsequent to the publication of this report.

Sampling error. The particular sample used for this survey is one of a large number of possible samples of the same size that could have been selected using the same sample design. Even if the same schedules, instructions, and enumerators were used, estimates from each of the different samples would differ from each other. The variability between estimates from all possible samples is defined as the sampling error. One common measure of sampling error is standard error which measures the precision with which an estimate from a sample approximates the average result of all possible samples. In addition, the standard error, as calculated for this report, also partially reflects the variation in the estimates due to some nonsampling errors, but it does not measure, as such, any systematic biases in the data. Therefore, the accuracy of the estimates depends on both the sampling and nonsampling errors, measured by the standard error, and biases and some additional nonsampling errors not measured by the standard error.

The procedure, as illustrated below, provides a method to construct interval estimates such that a known proportion of the intervals would contain the average of all possible samples. For example, if all possible samples were selected, each of these surveyed under identical conditions and an estimate and its estimated standard error were calculated from each sample, then:

1. Approximately 68 percent of the intervals from one standard error below the estimate to one standard error above the estimate would include the average result of all possible samples;

2. Approximately 90 percent of the intervals from 1.6 standard errors below the estimate to 1.6 standard errors above the estimate would include the average result of all possible samples;

3. Approximately 95 percent of the intervals from two standard errors below the estimate to two standard errors above the estimate would include the average result of all possible samples.

The average result of all possible samples either is or is not contained in any particular computed interval. However, for a particular sample one can say with specified confidence that the average result of all possible samples is included in the constructed interval.

All statements of a comparison appearing in this report are significant at a level of more than two standard errors. This means that for all differences cited in the text, the estimated difference is greater than twice the standard error of the difference.

The figures presented in the tables below are preliminary standard errors of various estimates based on data and assumptions used to design the survey. The tables of standard errors provide an indication of the order of magnitude of the standard errors rather than the precise standard error for any specified item.

The reliability of an estimated percentage, computed by using sample data for both numerator and denominator, depends upon both the size of the percentage and the size of the total upon which the percentage is based. Estimated percentages are relatively more reliable than the corresponding absolute estimates of the numerators and denominators of the percentages, particularly if the percentages are 50 percent of more.

Tables B-7 and B-8 present standard errors for estimated numbers in this report. Table B-9 presents a generalized table of standard errors for estimates of percentages. To find the standard error of a percentage for a specific State, region, division or the United States, multiply the standard error shown in B-9 by the factor shown in column (1) of table B-6 associated with the numerator. The standard errors in tables B-7 through B-8 are general and do not apply to any specific characteristic. To calculate a standard error for a characteristic, one of the factors shown in table B-5 should be applied to the standard errors presented in tables B-6 through B-9. Determine into which group in table B-5 - high, medium or low - a characteristic belongs. The appropriate factor is the factor for the group. For example, to produce a standard error for an estimate of total persons in poverty, multiply the standard error from tables B-7 and B-8 by the factor 1.10 for the high group and to estimate the standard error for an estimate of children 5 to 13 in poverty families, multiply the standard error from table B-7 and B-8 by the factor 0.75 fro the medium group.

Illustration of the use of the tables of standard errors. The estimate of the total number of persons from 5 to 13 years old in the United States is 32,800,000. By linear interpolation, standard error table B-7 shows the preliminary standard error on an estimate of this size to be approximately 242,803. Multiply this number by the factor 0.75 for the medium group. The final standard error associated with this estimate is 182,000 (i.e., 0.75 x 242,803). Consequently, the 68-percent confidence interval, as shown by these data, is from 32,168,000 to 32,982,000 persons. Therefore, a conclusion that the average estimate, derived from all possible samples, lies within a range computed in this way would be correct for roughly 68 percent of all possible samples. Similarly, we could conclude that the average estimate, derived from all possible samples, lies within the interval from 32,436,000 to 33,164,000 persons with 95-percent confidence.

Of these 32,800,000 persons, 10,488,000 or 32.0 percent, are in the South. By linear interpolation, standard error table B-9 shows the preliminary standard error of 32.0 percent on a base of 32,800,000 to be approximately 0.4 percentage points. The factor for the numerator of the percentage, the South, is 0.994 from table B-6 and the factor for age 5 to 13 is 0.75. Thus, the final standard error is 0.3 percent (0.4 x 0.75 x 0.994). Consequently, the 68-percent confidence interval, as shown by these data, is from 31.7 to 32.3 percent, and the 95-percent confidence interval is from 31.4 to 32.3 percent.

Standard error of a difference. For a difference between two sample estimates, the standard error is approximately equal to the square root of the sum of the squared standard errors of the estimates. This will represent the actual standard error quite accurately for the difference between two estimates of the same characteristic in two different areas, or for the difference between separate and uncorrelated characteristics in the same area. If, however, there is a high positive correlation between the two characteristics, the formula will overestimate the true standard error; whereas, if there is a high negative correlation, the formula will underestimate the true standard error.

Illustration of the computation of the standard error of a difference. Suppose that we wish to compare the above estimate of 32,800,000 persons from 5 to 13 years old with an estimate of the number of persons from 14 to 17 years old, approximately 16,410,000 persons. Thus, the apparent difference between the number of persons from 5 to 13 years old and the number from 14 to 17 years old is 16,390,000. By linear interpolation, standard error table B-7 shows the preliminary standard error of an estimate of 16,410,000 in the United States to be approximately 181,719. The factor for total persons age 14 to 17 is 0.6, thus the final standard error is approximately 109,000. The standard error of persons from 5 to 13 years old was shown to be 182,000. Therefore, the standard error of the estimated difference of 16,390,000 is about

$$\sqrt{(182,000)^2 + (109,000)^2} = 212,000$$

Consequently, the 68-percent confidence interval for the 16,390,000 difference is from 16,178,000 to 16,602,000. Therefore, a conclusion that the average estimate of this difference, derived from all possible samples, lies within a range computed in this way would be correct for roughly 68 percent of all possible samples. The 95-percent confidence interval is from 15,966,000 to 16,814,000. Thus, we can conclude with 95-percent confidence that the number of persons from 5 to 13 years old is greater than the number of persons from 14 to 17 years old.

Illustration of the comparison of percentages. Of the estimated 16,410,000 persons from 14 to 17 years old, 5,357,000, or 32.6 percent, are in the South. By linear interpolation, table B-9 shows the preliminary standard error of 32.6 percent on a base of 16,410,000 to be approximately 0.5 percent. The factor for the numerator of the percentage, South, is 0.994 and the factor for children age 14 to 17 is 0.6. Thus, the final standard error is 0.3 percent (0.5 x 0.6 x 0.994).

Suppose that we wish to compare the estimate of 32.6 percent for age 14 to 17 with the above estimate of 32.0 percent for age 5 to 13. The apparent difference is 0.6 percent.

The standard error of the difference of 0.6 percent is

$$\sqrt{(0.3)^2 + (0.3)^2} = 0.4$$

Thus, the 95-percent confidence interval for the difference is from - 0.2 percent (i.e., 0.6 - 2 x 0.4) to 1.4 percent (i.e., 0.6 - 2 x 0.4). Therefore, a conclusion that the average estimated difference, derived from all possible samples, lies within the range computed in this manner would be correct for roughly 95 percent of all samples. Because 0.0 lies between the limits of the 95-percent confidence interval, we cannot conclude with 95-percent confidence that there is a difference between the percent for age 5 to 13 and the percent for age 14 to 17, even though the percent for age 5 to 13 is apparently less.

Table B-5. Factors for Standard Errors of Items

Item	Factor
1. High—Characteristics which tend to describe all or nearly all persons or children within a household or family, or characteristics which give total counts of persons or children in a specified household or family. For example, total persons, persons 14 years and over, Spanish origin persons, children age 5 to 17, poor persons.	1.10
2. Low—Characteristics which identify one person within a household or family, characteristics of the elderly, or characteristics which are counts of households or families. For example, total families, female headed families, poor families, households in metropolitan areas, persons 65 years and over, persons age 25 to 30, children age 14 to 17.	0.60
3. Medium—Characteristics which tend to lie between the two extremes; that is, characteristics which do not restrict the number of household or family members to one person but which do not generally include all household or family members. For example, unrelated individuals, persons age 18 to 65, children age 5 to 13.	0.75

Table B-6. Factors for the Standard Errors of Estimates of Percentages and Values for Estimates of Standard Error for Means

State and region	Factor[1]	State and region	Factor[1]
United States.....................	0.974	South--Continued	
		South Atlantic--Continued	
Northeast..........................	1.000	Virginia...........................	0.948
New England......................	0.605	West Virginia.....................	0.611
Maine...........................	0.415	North Carolina....................	1.157
New Hampshire....................	0.261	South Carolina....................	0.831
Vermont.........................	0.248	Georgia...........................	1.143
Massachusetts...................	0.756	Florida...........................	1.198
Rhode Island....................	0.323		
Connecticut.....................	0.504	East South Central................	0.923
		Kentucky..........................	0.915
Middle Atlantic..................	1.099	Tennessee.........................	0.989
New York........................	1.282	Alabama...........................	0.944
New Jersey......................	0.745	Mississippi.......................	0.764
Pennsylvania....................	0.974		
		West South Central................	0.991
North Central.....................	0.817	Arkansas..........................	0.718
East North Central..............	0.869	Louisiana.........................	0.913
Ohio............................	0.933	Oklahoma..........................	0.767
Indiana.........................	0.701	Texas.............................	1.094
Illinois........................	0.966		
Michigan........................	0.848	West..............................	1.113
Wisconsin.......................	0.699	Mountain..........................	0.519
		Montana...........................	0.303
West North Central..............	0.672	Idaho.............................	0.247
Minnesota.......................	0.673	Wyoming...........................	0.188
Iowa............................	0.536	Colorado..........................	0.656
Missouri........................	0.886	New Mexico........................	0.463
North Dakota....................	0.336	Arizona...........................	0.648
South Dakota....................	0.441	Utah..............................	0.369
Nebraska........................	0.459	Nevada............................	0.242
Kansas..........................	0.542		
		Pacific...........................	1.256
South.............................	0.994	Washington........................	0.629
South Atlantic..................	1.023	Oregon............................	0.486
Delaware........................	0.293	California........................	1.414
Maryland........................	0.739	Alaska............................	0.260
District of Columbia............	0.406	Hawaii............................	0.331

[1]This factor is applied to the standard errors of percentages in table B-9 to obtain estimates of standard error for the States, regions, divisions and the United States.

Table B-7. Standard Errors of Estimates of Totals for the United States, Regions and Divisions

(68 chances out of 100. Blank cells indicate that standard errors for larger estimated totals were not calculated)

Size of estimate	United States	Northeast	New England	Middle Atlantic	North Central	East North Central	West North Central
500.........................	1,048	1,076	651	1,182	879	934	723
750.........................	1,284	1,317	797	1,448	1,076	1,144	886
1,000.......................	1,482	1,521	920	1,672	1,243	1,322	1,023
1,500.......................	1,816	1,863	1,127	2,048	1,822	1,619	1,253
2,500.......................	2,344	2,406	1,455	2,644	1,965	2,090	1,617
5,000.......................	3,315	3,402	2,058	3,739	2,780	2,956	2,287
7,500.......................	4,061	4,167	2,521	4,579	3,404	3,620	2,801
10,000......................	4,689	4,811	2,910	5,287	3,931	4,180	3,234
15,000......................	5,743	5,893	3,564	6,475	4,814	5,119	3,961
25,000......................	7,414	7,607	4,599	8,359	6,215	6,608	5,112
50,000......................	10,484	10,755	6,498	11,817	8,788	9,343	7,224
75,000......................	12,840	13,169	7,950	14,468	10,760	11,439	8,841
100,000.....................	14,825	15,202	9,170	16,701	12,422	13,204	10,200
150,000.....................	18,155	18,609	11,208	20,441	15,208	16,162	12,474
250,000.....................	23,433	24,000	14,409	26,353	19,616	20,840	16,054
500,000.....................	33,120	33,852	20,161	37,141	27,681	29,381	22,527
750,000.....................	40,541	41,352	24,425	45,332	33,827	35,872	27,372
1,000,000...................	46,786	47,623	27,892	52,163	38,974	41,291	31,352
1,500,000...................	57,236	58,017	33,384	63,438	47,521	50,251	37,769
2,500,000...................	73,722	74,094	41,018	80,731	60,796	64,041	47,090
5,000,000...................	103,658	101,882	49,899	109,931	83,994	87,549	60,290
7,500,000...................	126,214	121,119	49,218	129,238	100,380	103,398	65,211
10,000,000..................	144,879	135,499	38,470	142,723	112,960	114,804	63,796
15,000,000..................	175,314	154,725		157,654	130,824	128,627	36,124
25,000,000..................	220,737	167,032		149,749	147,563	129,711	
50,000,000..................	291,461				98,994		
75,000,000..................	329,658						
100,000,000.................	346,265						
150,000,000.................	323,805						
250,000,000.................							

	South	South Atlantic	East South Central	West South Central	West	Mountain	Pacific
500.........................	1,069	1,101	992	1,066	1,197	558	1,350
750.........................	1,310	1,348	1,215	1,306	1,466	684	1,654
1,000.......................	1,512	1,557	1,403	1,508	1,693	789	1,910
1,500.......................	1,852	1,907	1,719	1,847	2,074	967	2,339
2,500.......................	2,392	2,462	2,219	2,384	2,678	1,248	3,020
5,000.......................	3,382	3,482	3,138	3,372	3,787	1,765	4,271
7,500.......................	4,143	4,265	3,843	4,129	4,638	2,162	5,231
10,000......................	4,783	4,924	4,437	4,768	5,355	2,496	6,040
15,000......................	5,858	6,031	5,434	5,839	6,558	3,057	7,397
25,000......................	7,563	7,784	7,013	7,536	8,466	3,944	9,548
50,000......................	10,694	11,005	9,908	10,652	11,969	5,571	13,497
75,000......................	13,095	13,473	12,124	13,038	14,654	6,814	16,523
100,000.....................	15,118	15,552	13,986	15,046	16,915	7,858	19,070
150,000.....................	18,509	19,033	17,098	18,405	20,703	9,598	23,335
250,000.....................	23,877	24,534	21,990	23,703	26,691	12,326	30,071
500,000.....................	33,704	34,565	30,801	33,316	37,619	17,197	42,334
750,000.....................	41,202	42,171	37,357	40,550	45,917	20,771	51,612
1,000,000...................	47,486	48,507	42,708	46,529	52,839	23,643	59,321
1,500,000...................	57,939	58,947	51,242	56,258	64,267	28,102	71,973
2,500,000...................	74,229	74,891	63,314	70,710	81,800	33,966	91,138
5,000,000...................	102,932	101,513	78,612	92,870	111,445	38,665	122,372
7,500,000...................	128,511	118,696	80,707	104,283	131,096	31,996	141,443
10,000,000..................	139,606	130,230	70,781	108,397	144,879		152,970
15,000,000..................	163,355	141,297		96,824	160,343		158,981
25,000,000..................	189,670	122,576			153,622		96,824
50,000,000..................	171,610						
75,000,000..................							
100,000,000.................							
150,000,000.................							
250,000,000.................							

Table B-8. Standard Errors of Estimated Totals for States

(68 chances out of 100. Blank cells indicate that standard errors for larger estimated totals were not calculated)

Size of estimate	Alabama	Alaska	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	District of Columbia
500......................	1,015	279	697	772	1,521	706	542	315	436
750......................	1,243	341	854	945	1,863	865	664	386	534
1,000....................	1,436	394	986	1,091	2,151	998	767	445	616
1,500....................	1,758	482	1,207	1,337	2,635	1,223	939	545	755
2,500....................	2,270	622	1,558	1,725	3,402	1,578	1,212	703	974
5,000....................	3,209	876	2,203	2,439	4,810	2,231	1,714	993	1,375
7,500....................	3,929	1,069	2,696	2,985	5,891	2,731	2,099	1,213	1,681
10,000...................	4,535	1,230	3,112	3,445	6,802	3,152	2,422	1,398	1,937
15,000...................	5,551	1,494	3,807	4,215	8,330	3,857	2,965	1,704	2,364
25,000...................	7,156	1,899	4,904	5,428	10,752	4,970	3,821	2,181	3,029
50,000...................	10,085	2,574	6,897	7,631	15,196	6,993	5,382	3,013	4,203
75,000...................	12,307	3,010	8,399	9,289	18,601	8,521	6,564	3,601	5,046
100,000..................	14,160	3,303	9,642	10,660	21,465	9,788	7,547	4,052	5,707
150,000..................	17,218	3,584	11,671	12,893	26,258	11,863	9,165	4,692	6,688
250,000..................	21,901	3,112	14,705	16,215	33,817	14,987	11,627	5,291	7,794
500,000..................	29,786		19,455	21,336	47,534	19,987	15,692	3,535	7,245
750,000..................	34,966		22,062	24,019	57,858	22,904	18,253		
1,000,000................	38,548		23,259	25,059	66,392	24,494	19,899		
1,500,000................	42,382		22,079	22,765	80,283	24,525	21,195		
2,500,000................	39,385				100,933	2,738	16,317		
5,000,000................					132,664				
7,500,000................					149,122				
10,000,000...............					155,241				
15,000,000...............					139,642				
25,000,000...............									

	Florida	Georgia	Hawaii	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky
500......................	1,289	1,229	356	265	1,039	753	576	583	984
750......................	1,579	1,505	436	325	1,272	923	706	714	1,205
1,000....................	1,823	1,738	504	375	1,469	1,066	815	824	1,391
1,500....................	2,233	2,129	617	459	1,799	1,305	998	1,009	1,704
2,500....................	2,883	2,748	796	592	2,323	1,685	1,288	1,303	2,200
5,000....................	4,076	3,886	1,123	837	3,285	2,383	1,821	1,841	3,110
7,500....................	4,992	4,758	1,374	1,023	4,023	2,918	2,230	2,254	3,808
10,000...................	5,763	5,493	1,584	1,180	4,645	3,368	2,574	2,601	4,395
15,000...................	7,056	6,724	1,934	1,441	5,688	4,123	3,149	3,182	5,379
25,000...................	9,105	8,672	2,481	1,848	7,340	5,318	4,059	4,099	6,934
50,000...................	12,857	12,233	3,453	2,573	10,368	7,503	5,715	5,764	9,770
75,000...................	15,723	14,943	4,159	3,100	12,684	9,168	6,968	7,019	11,920
100,000..................	18,128	17,210	4,720	3,519	14,629	10,561	8,009	8,057	13,712
150,000..................	22,136	20,967	5,575	4,159	17,876	12,872	9,719	9,751	16,664
250,000..................	28,404	26,781	6,633	4,956	22,971	16,454	12,311	12,280	21,174
500,000..................	39,550	36,837	7,000	5,267	32,105	22,682	16,545	16,224	28,714
750,000..................	47,668	43,809	3,873	3,092	38,848	27,041	19,145	18,366	33,591
1,000,000................	54,138	49,030			44,305	30,347	20,736	19,313	36,878
1,500,000................	64,033	56,044			52,884	34,921	21,650	18,145	40,081
2,500,000................	76,460	60,704			64,565	38,632	13,919		35,106
5,000,000................	82,188				76,648	16,881			
7,500,000................	52,213				71,545				
10,000,000...............					43,588				
15,000,000...............									
25,000,000...............									

Table B-8. Standard Errors of Estimated Totals for States—Continued

(68 chances out of 100. Blank cells indicate that standard errors for larger estimated totals were not calculated)

Size of estimate	Louisiana	Maine	Maryland	Massachusetts	Michigan	Minnesota	Mississippi	Missouri	Montana
500	982	445	778	812	912	724	822	953	326
750	1,203	546	973	995	1,117	886	1,006	1,167	399
1,000	1,389	630	1,124	1,149	1,290	1,024	1,162	1,348	461
1,500	1,701	772	1,377	1,408	1,580	1,254	1,423	1,651	564
2,500	2,196	996	1,777	1,817	2,040	1,618	1,837	2,131	723
5,000	3,105	1,407	2,513	2,569	2,885	2,288	2,597	3,013	1,028
7,500	3,801	1,721	3,077	3,146	3,533	2,802	3,179	3,689	1,257
10,000	4,388	1,985	3,552	3,632	4,079	3,234	3,669	4,259	1,449
15,000	5,371	2,425	4,347	4,447	4,994	3,959	4,488	5,213	1,769
25,000	6,924	3,116	5,606	5,736	6,444	5,104	5,782	6,723	2,268
50,000	9,759	4,353	7,903	8,094	9,101	7,195	8,132	9,483	3,151
75,000	11,912	5,264	9,649	9,892	11,131	8,783	9,905	11,583	3,789
100,000	13,708	6,000	11,106	11,397	12,835	10,109	11,374	13,338	4,293
150,000	16,673	7,151	13,516	13,896	15,676	12,299	13,772	16,247	5,049
250,000	21,223	8,703	17,222	17,779	20,124	15,664	17,365	20,742	5,942
500,000	28,917	10,198	23,537	24,566	28,053	21,377	23,027	28,495	5,894
750,000	34,021	9,205	27,787	29,361	33,852	25,196	26,192	33,841	
1,000,000	37,603	4,242	30,838	33,045	38,496	27,910	27,730	37,815	
1,500,000	41,632		34,510	38,281	45,661	31,080	26,762	43,058	
2,500,000	39,953		34,641	43,214	54,909	30,577		46,043	
5,000,000				29,325	61,073				
7,500,000					46,314				
10,000,000									
15,000,000									
25,000,000									

Size of estimate	Nebraska	Nevada	New Hampshire	New Jersey	New Mexico	New York	North Carolina	North Dakota	Ohio
500	493	260	280	801	497	1,378	1,244	361	1,008
750	604	319	344	981	609	1,688	1,524	443	1,229
1,000	697	368	397	1,133	703	1,950	1,760	511	1,420
1,500	854	451	486	1,388	861	2,388	2,155	626	1,739
2,500	1,102	581	627	1,792	1,112	3,083	2,782	807	2,245
5,000	1,557	821	886	2,533	1,571	4,360	3,934	1,139	3,174
7,500	1,906	1,003	1,083	3,102	1,922	5,339	4,817	1,393	3,888
10,000	2,199	1,156	1,249	3,582	2,217	6,165	5,561	1,605	4,488
15,000	2,689	1,410	1,525	4,385	2,709	7,549	6,808	1,958	5,496
25,000	3,460	1,804	1,956	5,658	3,482	9,743	8,781	2,506	7,092
50,000	4,852	2,495	2,723	7,987	4,869	13,770	12,389	3,469	10,018
75,000	5,892	2,986	3,280	9,765	5,895	16,852	15,138	4,153	12,255
100,000	6,745	3,364	3,722	11,256	6,727	19,446	17,438	4,684	14,135
150,000	8,114	3,907	4,397	13,738	8,039	23,783	21,256	5,451	17,270
250,000	10,087	4,444	5,232	17,610	9,842	30,616	27,176	6,234	22,189
500,000	12,786	3,316	5,522	24,454	11,811	42,988	37,479	4,949	31,000
750,000	13,610		3,061	29,387	11,308	52,267	44,705		37,495
1,000,000	12,922			33,271	7,874	59,908	50,199		42,743
1,500,000	3,240			39,076		72,270	57,842		50,970
2,500,000				45,825		90,388	64,255		62,088
5,000,000				44,440		116,897	31,937		73,041
7,500,000						128,393			66,633
10,000,000						128,957			34,205
15,000,000						94,313			
25,000,000									

Table B-8. Standard Errors of Estimated Totals for States—Continued

(68 chances out of 100. Blank cells indicate that standard errors for larger estimated totals were not calculated)

Size of estimate	Oklahoma	Oregon	Pennsylvania	Rhode Island	South Carolina	South Dakota	Tennessee	Texas
500........................	825	523	1,048	347	894	474	1,063	1,177
750........................	1,010	640	1,284	424	1,095	581	1,302	1,441
1,000......................	1,166	740	1,482	490	1,265	671	1,504	1,664
1,500......................	1,428	906	1,816	600	1,549	821	1,842	2,038
2,500......................	1,844	1,169	2,344	775	1,999	1,059	2,378	2,631
5,000......................	2,607	1,653	3,315	1,094	2,826	1,496	3,362	3,721
7,500......................	3,191	2,023	4,059	1,338	3,460	1,828	4,116	4,557
10,000.....................	3,683	2,335	4,687	1,543	3,993	2,107	4,752	5,261
15,000.....................	4,507	2,857	5,739	1,885	4,887	2,571	5,817	6,443
25,000.....................	5,807	3,681	7,406	2,420	6,209	3,294	7,500	8,314
50,000.....................	8,174	5,177	10,463	3,374	8,865	4,567	10,575	11,746
75,000.....................	9,963	6,305	12,800	4,072	10,807	5,480	12,912	14,371
100,000....................	11,449	7,239	14,765	4,631	12,421	6,193	14,864	16,577
150,000....................	13,886	8,764	18,044	5,494	15,069	7,244	18,093	20,260
250,000....................	17,567	11,048	23,193	6,609	19,077	8,403	23,065	26,046
500,000....................	23,526	14,637	32,438	7,365	25,597	7,549	31,559	36,445
750,000....................	27,103	16,630	39,280	5,629	29,562		37,309	44,152
1,000,000..................	29,189	17,578	44,833		31,937		41,472	50,418
1,500,000..................	29,924	16,859	53,602		33,079		46,604	60,342
2,500,000..................	14,747		65,698		19,267		47,539	74,136
5,000,000..................			79,183					90,166
7,500,000..................			76,558					88,888
10,000,000.................			55,587					69,354
15,000,000.................								
25,000,000								

Size of estimate	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin	Wyoming
500........................	396	266	1,019	676	657	751	202
750........................	485	326	1,248	828	805	920	247
1,000......................	561	376	1,441	956	929	1,063	285
1,500......................	686	460	1,765	1,171	1,138	1,302	350
2,500......................	886	594	2,279	1,512	1,469	1,681	451
5,000......................	1,252	838	3,222	2,138	2,076	2,376	636
7,500......................	1,532	1,023	3,945	2,618	2,541	2,910	776
10,000.....................	1,767	1,178	4,554	3,022	2,932	3,359	893
15,000.....................	2,160	1,435	5,575	3,698	3,586	4,112	1,086
25,000.....................	2,777	1,833	7,190	4,768	4,617	5,302	1,382
50,000.....................	3,886	2,518	10,142	6,718	6,484	7,478	1,884
75,000.....................	4,708	2,990	12,389	8,198	7,884	9,134	2,216
100,000....................	5,376	3,342	14,268	9,431	9,037	10,517	2,449
150,000....................	6,436	3,805	17,381	11,465	10,903	12,808	2,711
250,000....................	7,909	4,069	22,197	14,577	13,640	16,347	2,598
500,000....................	9,630		30,520	19,798	17,656	22,438	
750,000....................	9,516		36,280	23,205	19,418	26,622	
1,000,000..................	7,483		40,583	25,534	19,544	29,715	
1,500,000..................			46,330	27,928	14,517	33,741	
2,500,000..................			49,974	25,298		35,742	
5,000,000..................							
7,500,000..................							
10,000,000.................							
15,000,000.................							
25,000,000.................							

Table B-9. Standard Errors of Estimated Percentages

(68 chances out of 100. Blank cells indicate that standard errors for larger estimated totals were not calculated)

Base of percentage	Estimated percentage						
	1 or 99	2 or 98	5 or 95	10 or 90	15 or 85	25 or 75	50
500.0......................	21.4	30.1	46.9	64.6	76.8	93.2	107.6
750.0......................	17.5	24.6	38.3	52.7	62.7	76.1	87.9
1,000.0....................	15.1	21.3	33.2	45.7	54.3	65.9	76.1
1,500.0....................	12.4	17.4	27.1	37.3	44.4	53.8	62.1
2,500.0....................	9.6	13.5	21.0	28.9	34.4	41.7	48.1
5,000.0....................	6.6	9.5	14.0	20.4	24.3	29.3	34.0
7,500.0....................	5.5	7.8	12.1	16.7	19.8	24.1	27.8
10,000.0...................	4.8	6.7	10.5	14.4	17.2	20.8	24.1
15,000.0...................	3.9	5.5	8.6	11.8	14.0	17.0	19.6
25,000.0...................	3.0	4.3	6.6	9.1	10.9	13.2	15.2
50,000.0...................	2.1	3.0	4.7	6.5	7.7	9.3	10.8
75,000.0...................	1.7	2.5	3.8	5.3	6.3	7.6	8.8
100,000.0..................	1.5	2.1	3.3	4.6	5.4	6.6	7.6
150,000.0..................	1.2	1.7	2.7	3.7	4.4	5.4	6.2
250,000.0..................	1.0	1.3	2.1	2.9	3.4	4.2	4.8
500,000.0..................	0.7	1.0	1.5	2.0	2.4	2.9	3.4
750,000.0..................	0.6	0.8	1.2	1.7	2.0	2.4	2.8
1,000,000.0...............	0.5	0.7	1.0	1.4	1.7	2.1	2.4
1,500,000.0...............	0.4	0.6	0.9	1.2	1.4	1.7	2.0
2,500,000.0...............	0.3	0.4	0.7	0.9	1.1	1.3	1.5
5,000,000.0...............	0.2	0.3	0.5	0.6	0.8	0.9	1.1
7,500,000.0...............	0.2	0.2	0.4	0.5	0.6	0.8	0.9
10,000,000.0..............	0.2	0.2	0.3	0.5	0.5	0.7	0.8
15,000,000.0..............	0.12	0.2	0.3	0.4	0.4	0.5	0.6
25,000,000.0..............	0.10	0.13	0.2	0.3	0.3	0.4	0.5
50,000,000.0..............	0.07	0.10	0.15	0.2	0.2	0.3	0.3
75,000,000.0..............	0.06	0.08	0.12	0.2	0.2	0.2	0.3
100,000,000.0.............	0.05	0.07	0.10	0.14	0.2	0.2	0.2
150,000,000.0.............	0.04	0.06	0.09	0.12	0.14	0.2	0.2
250,000,000.0.............	0.03	0.04	0.07	0.09	0.11	0.13	0.2